

REMARKS

I. CLAIM STATUS

Claims 20-38 are currently pending. No amendments are made herein.

Applicants respectfully acknowledge that the Examiner has withdrawn the 35 U.S.C. § 103(a) rejections based, in part, on U.S. Patent Application Publication No. 2006/0051499 to Balconi et al. See Aug. 14, 2008, Office Action at 9.

II. REJECTIONS UNDER 35 U.S.C. § 103(a)

A. The Examiner rejects claims 20-29, 33, and 36-37 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,225,749 to Pierre et al. ("Pierre"), in view of WO 99/33070 to Belli et al. ("Belli"), and further in view of WO 02/27731 to Castellani et al., using U.S. Patent No. 6,824,870 as a translation (collectively, "Castellani"). See Aug. 14, 2008, Office Action at 2-5.

The Examiner asserts the Pierre "teaches a continuous process for manufacturing an electric cable comprising coating a conductor with an insulating layer in a radially outer position with respect to the conductor and form a circumferentially closed metallic sheath around the insulating layer." *Id.* at 2 (citing Pierre, col. 1, lines 54-66 and Figure 2).

The Examiner concedes that "Pierre does not specifically teach the insulating layer is thermoplastic; neither cooling down the insulating layer to less than 70C, nor the metallic shield being a screen." *Id.* at 3. The Examiner relies on Belli for the disclosure that "it is suitable to use thermoplastic material as insulating layer for electric cables." *Id.* The Examiner further concedes that neither Pierre nor Belli "teach the

circumferentially closed metallic shield is a metallic screen nor extruded insulating layer is cooled down to less than 70 C (and then coat with the metal layer).” *Id.* The Examiner relies on Castellani to attempt to cure these deficiencies, arguing that Castellani teaches that the “metallic shield is a metallic screen,” and that “the cable is cool[ed] down to room temperature (less than 70C) after the insulating layer is wrapped around it.” *Id.* (citing Castellani, col. 11, lines 9-11).

Applicants respectfully traverse the rejection for at least the following reasons.

Several basic factual inquiries must be made in order to determine the obviousness or non-obviousness of claims of a patent application under 35 U.S.C.

§ 103. These factual inquiries, set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. 459, 467 (1966), require the Examiner to:

- (1) Determine the scope and content of the prior art;
- (2) Ascertain the differences between the prior art and the claims in issue;
- (3) Resolve the level of ordinary skill in the pertinent art; and
- (4) Evaluate evidence of secondary considerations.

The obviousness or nonobviousness of the claimed invention is then evaluated in view of the results of these inquiries. *Graham*, 383 U.S. at 17-18, 148 U.S.P.Q. at 467; see also *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1730, 82 U.S.P.Q.2d 1385, 1388 (2007).

Indeed, to establish a *prima facie* case of obviousness, the Examiner must:

make a determination whether the claimed invention “as a whole” would have been obvious at that time to that person. Knowledge of applicant’s disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the “differences,” conduct the search and evaluate the “subject matter as a whole” of the invention. The

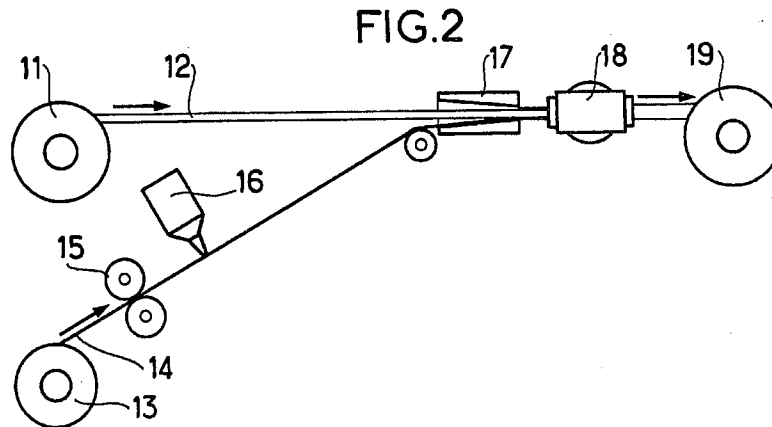
tendency to resort to “hindsight” based upon applicant’s disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

M.P.E.P. § 2142. “The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious.”

Id. It is important to note, moreover, that each prior art reference relied upon in a rejection “must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.” M.P.E.P. § 2141.03(VI) (emphasis in original); *see also Graham*, 383 U.S. at 17, 148 U.S.P.Q. at 467.

Here, the Examiner has not established a *prima facie* case of obviousness because the claimed invention as a whole would not have been obvious in view of Pierre, Castellani, and Belli when considered as a whole. Specifically, none of the references teach or suggest a continuous process for manufacturing an electric cable comprising the steps of, *inter alia*, extruding an insulating layer, cooling the extruded insulating layer to a temperature not higher than 70°C and forming a circumferentially closed metallic screen around said extruded insulating layer.

Regarding the scope and content of the prior art, as noted above, the Examiner asserts the Pierre discloses “a continuous process.” Aug. 14, 2008, Office Action at 2 (citing Pierre, col. 1, lines 54-66 and Figure 2). Applicants respectfully disagree. Figure 2 of Pierre, which the Examiner cites, depicts one reel **11** paying out the cable **12** constituted by a conductor **1** already covered with its insulator **3** and with its two extruded screens **2** and **4**, and separate reel **13** paying out a metal strip **14**. See Pierre, col. 2, lines 40-45 and Figure 2.



The specification as-published (U.S. Patent Application Publication No. 2007/0051450 A1) at paragraph [0023] explains that a continuous process is “a process without intermediate resting or collecting steps.” See *also* Specification as-published at ¶ [0152] (“In the present description, by ‘continuous process’ it is meant a process in which the time required to manufacture a given cable length is inversely proportional to the advancement speed of the cable in the line, so that there are no intermediate rest steps between the conductor supply and the finished cable take-up.”). In particular, the specification as-published explains that such intermediate rest steps, which are avoided by the invention, are common to the prior art processes of adding/extruding insulating coatings to the conductor before adding the metallic screen. See *id.* at ¶¶ [0014]-[0019] and [0022]-[0024].

Pierre (Figure 2, in particular) teaches a cable, constituting conductor 1, insulator 3, and extruded screens 2 and 4, that has already been manufactured and set on reel 11 (*i.e.*, the resting step) prior to being fed to shaping device 17, which then folds the metal strip 14 over the cable. This is not a continuous process for manufacturing a cable as described and claimed in the present application. See, *e.g.*, Specification as-published at ¶ [0164] (“This ‘rest’ step is typically carried out by coiling the semi-

finished element on spools at the end of the extrusion of the relevant layers. After that, the cross-linked, semi-finished element is supplied to another, independent line, where the cable is completed.”). The Examiner has not and cannot identify any teaching or suggestion in Pierre of a process that is continuous.

Similarly, Castellani does not teach a continuous process for manufacturing a cable as described and claimed in the present application. The Examiner states that “Castellani teaches a method for producing cable [abstract lines 1-2] comprising a conductive core (2) insulator shield (4) and a circumferentially closed metallic shield . . . (6) [fig. 1, column 8, lines 41-48].” Aug. 14, 2008, Office Action at 3. The Examiner then implies that the metallic shield is placed on the cable core in a continuous process after the cable is cooled down to room temperature. See *id.* (citing Castellani, col. 11, lines 9-11). A person skilled in the art would recognize, however, that is not the case. Applicants acknowledge that Castellani describes (1) at column 8, lines 41-48 one embodiment of a finished cable having a screen 6 and (2) at column 11, lines 9-11 another embodiment of a finished cable, which is cooled to ambient temperature once it leaves the extrusion head. Contrary to the Examiner’s assumption, the latter of the two aforementioned finished cables, however, does not have a metallic shield. This missing feature is consistent with Applicants’ explanation of the prior art’s failure to teach the claimed process. Furthermore, Castellani is completely silent about applying an insulating layer and then applying a metallic shield to an extruded cable in a continuous process. See Castellani, col. 11, lines 11-14 and Table 2 (describing the materials used in the finished cable and not including a metallic shield).

Furthermore, as discussed above, the Examiner concedes that neither Pierre nor Belli teach that the “extruded insulating layer is cooled down to less than 70 C (and then coat with the metal layer).” Aug. 14, 2008, Office Action at 3. The Examiner, however, attempts to rely on Castellani for the teaching that “the cable is cool[ed] down to room temperature (less than 70C) after the insulating layer is wrapped around it.” *Id.* (citing Castellani, col. 11, lines 9-11). As noted above, column 11, lines 9-11 of Castellani describes an embodiment of a finished cable, which is cooled to ambient temperature once it leaves the extrusion head. Contrary to the Examiner’s assumption, however, this finished cable does **not** have a metallic shield. See Castellani, col. 11, lines 11-14 and Table 2 (describing the materials used in the finished cable and not including a metallic shield). Accordingly, Castellani, like Pierre and Belli, fails to teach or suggest that the claimed step of cooling the extruded insulating layer followed by a step of forming a circumferentially closed metallic screen around the cooled extruded insulating layer.

Finally, Belli, like Pierre and Castellani, does not teach applying an insulating layer and then forming a metallic screen around an extruded cable cooled to a temperature not higher than 70°C in a continuous process. See, e.g., Belli, page 13, lines 27-28 (“Once the expanded layer has been prepared, the cable is enclosed inside the metal shield.”), page 16, lines 25-26 (“The semi-finished product obtained was subsequently wound on a reel.”), page 17, line 24 – page 18, line 14 (cross-linked cable core was subsequently wrapped with an aluminum strip).

Accordingly, the prior art references, when considered as a whole as required by *Graham* and its progeny, do not teach or suggest all of the claim limitations of the

instant invention. In particular, none of the references teach or suggest a continuous process for manufacturing an electric cable comprising the steps of, *inter alia*, extruding an insulating layer, cooling the extruded insulating layer to a temperature not higher than 70°C and forming a circumferentially closed metallic screen around said extruded insulating layer. For at least this reason, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness and the rejection should be withdrawn.

B. The Examiner rejects claims 30, 33, and 34 under 35 U.S.C. § 103(a) as being unpatentable over Pierre, Belli, and Castellani as applied to claim 20 above, and further in view of U.S. Patent No. 6,501,027 to Belli et al. ("the '027 patent"). See Aug. 14, 2008, Office Action at 6.

Applicants respectfully traverse for at least the following reason.

As discussed above, Pierre, Belli, and Castellani do not teach or suggest a continuous process for manufacturing an electric cable comprising the steps of, *inter alia*, extruding an insulating layer, cooling the extruded insulating layer to a temperature not higher than 70°C and forming a circumferentially closed metallic screen around said extruded insulating layer. Because the '027 patent does not cure this deficiency, Applicants respectfully submit that the rejection is in error and should be withdrawn.

C. The Examiner rejects claims 31 and 32 under 35 U.S.C. § 103(a) as being unpatentable over Pierre, Belli, and Castellani as applied to claim 29 above, and further in view of WO 03/088274 to Belli et al. ("WO '274"). See Aug. 14, 2008, Office Action at 6-7.

Applicants respectfully traverse for at least the following reason.

As discussed above, Pierre, Belli, and Castellani do not teach or suggest a continuous process for manufacturing an electric cable comprising the steps of, *inter alia*, extruding an insulating layer, cooling the extruded insulating layer to a temperature not higher than 70°C and forming a circumferentially closed metallic screen around said extruded insulating layer. Because WO '274 does not cure this deficiency, Applicants respectfully submit that the rejection is in error and should be withdrawn.

D. The Examiner rejects claim 35 under 35 U.S.C. § 103(a) as being unpatentable over Pierre, Belli, and Castellani as applied to claim 20 above, and further in view of U.S. Patent No. 6,416,813 to Prats ("Prats"). See Aug. 14, 2008, Office Action at 7-8.

Applicants respectfully traverse for at least the following reason.

As discussed above, Pierre, Belli, and Castellani do not teach or suggest a continuous process for manufacturing an electric cable comprising the steps of, *inter alia*, cooling the extruded insulating layer to a temperature not higher than 70°C and forming a circumferentially closed metallic screen around said extruded insulating layer. Because Prats does not cure this deficiency, Applicants respectfully submit that the rejection is in error and should be withdrawn.

E. The Examiner rejects claim 38 under 35 U.S.C. § 103(a) as being unpatentable over Pierre, Belli, and Castellani as applied to claim 20 above, and further in view of WO 2002/047092 to Belli et al. ("WO '092"). See Aug. 14, 2008, Office Action at 8.

Applicants respectfully traverse for at least the following reason.

As discussed above, Pierre, Belli, and Castellani do not teach or suggest a continuous process for manufacturing an electric cable comprising the steps of, *inter alia*, cooling the extruded insulating layer to a temperature not higher than 70°C and forming a circumferentially closed metallic screen around said extruded insulating layer. Because WO '092 does not cure this deficiency (see, e.g., specification as-published at ¶ [0020]), Applicants respectfully submit that the rejection is in error and should be withdrawn.

Conclusion

In view of the foregoing remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

If the Examiner believes a telephone conference could be useful in resolving any outstanding issues, the Examiner is respectfully invited to contact Applicants' undersigned counsel at (202) 408-4152.


Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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Dated: December 11, 2008

By: _____


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